IN THE CLAIMS:

Amend the claims as follows.

Claims 1-37 (Canceled).

38. (Previously Presented) A method for determining the susceptibility of a bacteria to a reagent selected from an antibiotic agent or a biostatic agent or a compound suspected of having an antibiotic property or a compound suspected of having a biostatic property, said method comprising the steps of:

(i) dividing a culture comprising said bacteria into at least a first sample and a second sample;

(ii) incubating said first sample in the presence of said reagent to form a first incubated sample, lysing bacteria in said first incubated sample to form a first lysed-incubated sample, exposing the first lysed-incubated sample to ADP, a source of magnesium ions, luciferin and luciferase, to form a first mixture, and measuring luminescence emitted from said first mixture as an indication of the amount of any adenylate kinase present in the first lysed-incubated sample;

(iii) subjecting said second sample to either of the following steps (iii)(a) and (iii)(b);

(a) incubating said second sample in the absence of said reagent to form a second incubated sample, lysing bacteria in said second incubated sample to form a second lysed-incubated sample, exposing the second lysed-incubated sample to ADP, a source of magnesium ions, luciferin and luciferase, to form a second mixture, and

IN THE CLAIMS:

Amend the claims as follows.

Claims 1-37 (Canceled).

38. (Previously Presented) A method for determining the susceptibility of a bacteria to a reagent selected from an antibiotic agent or a biostatic agent or a compound suspected of having an antibiotic property or a compound suspected of having a biostatic property, said method comprising the steps of:

(i) dividing a culture comprising said bacteria into at least a first sample and a second sample;

(ii) incubating said first sample in the presence of said reagent to form a first incubated sample, lysing bacteria in said first incubated sample to form a first lysed-incubated sample, exposing the first lysed-incubated sample to ADP, a source of magnesium ions, luciferin and luciferase, to form a first mixture, and measuring luminescence emitted from said first mixture as an indication of the amount of any adenylate kinase present in the first lysed-incubated sample;

(iii) subjecting said second sample to either of the following steps (iii)(a) and (iii)(b);

(a) incubating said second sample in the absence of said reagent to form a second incubated sample, lysing bacteria in said second incubated sample to form a second lysed-incubated sample, exposing the second lysed-incubated sample to ADP, a source of magnesium ions, luciferin and luciferase, to form a second mixture, and

measuring luminescence emitted from said second mixture as an indication of the amount of any adenylate kinase present in the second lysed-incubated sample;

(b) lysing bacteria in said second sample without further incubating said second sample, in the absence of said reagent, to form a first lysed sample, exposing the first lysed sample to ADP, a source of magnesium ions, luciferin and luciferase, to form a third mixture, and measuring luminescence emitted from said third mixture as an indication of the amount of any adenylate kinase present in the first lysed sample; and

(iv) comparing the indicated amount of adenylate kinase present in the first lysed-incubated sample with the indicated amount of any adenylate kinase present in the second lysed-incubated sample or the first lysed sample as a determination of the susceptibility of said bacteria to the reagent, wherein

(a) said bacteria are susceptible to said reagent when the indicated amount of adenylate kinase in said second lysed-incubated sample is greater than the indicated amount of adenylate kinase in said first lysed-incubated sample, the magnitude of the difference between said indicated amounts being indicative of the degree of susceptibility of said bacteria to said reagent, wherein a greater difference is indicative of a greater susceptibility, and

(b) when the magnitude of the difference between the indicated amount of adenylate kinase in said first lysed-incubated sample is greater than the indicated amount of adenylate kinase in said first lysed sample, then the magnitude of the difference indicates the degree of susceptibility of said bacteria to said reagent, wherein a smaller difference is indicative of a greater susceptibility.

39. (Previously Presented) The method according to claim 38 wherein:

said dividing step (i) further comprises dividing said culture in to a third sample; and

said subjecting of step (iii) further comprises subjecting said third sample to step (iii)(a) to form a third lysed-incubated sample and an indicated amount of adenylate kinase present in the third lysed-incubated sample, if said second sample is subjected to step (iii)(b), or

said subjecting of step (iii) further comprises subjecting said third sample to step (iii)(b) to form a second lysed sample and an indicated amount of adenylate kinase present in the second lysed sample, if said second sample is subjected to step (iii)(a); and

comparing the indicated amount of any adenylate kinase present in step (ii) with the indicated amount of any adenylate kinase present in said third lysed-incubated sample or said second lysed sample to determine the susceptibility of said bacteria to the reagent, wherein

the bacteria are susceptible to said reagent if the indicated amount of adenylate kinase present in said third lysed-incubated sample is greater than the indicated amount of adenylate kinase present in the first lysed-incubated sample, the magnitude of the difference between said indicated amounts being indicative of the degree of susceptibility of said bacteria to said reagent, wherein a greater difference is indicative of a greater susceptibility, and,

when the magnitude of the difference between the indicated amount of adenylate kinase in said second lysed-incubated sample is greater than the indicated amount of

adenylate kinase in said first lysed sample, then the magnitude of the difference indicates the degree of susceptibility of said bacteria to said reagent, wherein a smaller difference is indicative of a greater susceptibility.

40. (Previously Presented) The method according to claim 38 wherein bacteria are lysed using a chemical lytic agent.

41. (Previously Presented) The method according to claim 38 wherein the lytic agent is specific for a particular bacteria.

42. (Previously Presented) The method according to claim 41 wherein the lytic agent is a bacteriophage which infects and lyses a specific bacterial genus, species or strain.

43. (Previously Presented) The method according to claim 38 wherein bacteria are lysed using an enzyme.

44. (Previously Presented) The method according to claim 43 wherein the enzyme is bacteriolysin.

Claim 45 (Canceled).

46. (Currently Amended) The method according to claim ~~45~~ 38 wherein said culture is a mixed culture of bacteria, said mixed culture of bacteria comprising target bacteria and non-target bacteria and wherein the mixed culture of bacteria is first subjected to a separation step to substantially remove any non-target bacteria from the mixed culture.

47. (Currently Amended) The method according to claim 46 wherein the separation comprises an immunocapture technique ~~techniques~~.

48. (Currently Amended) The method according to claim 47 wherein ~~the~~ target bacteria are concentrated at a solid surface on which antibodies or ~~the~~ binding fragments thereof which are specific for the target bacteria are immobilized.

49. (Previously Presented) The method according to claim 38 wherein the culture further comprises a growth medium which selectively favors the bacteria.

50. (Previously Presented) A method for determining the susceptibility of a target bacteria to a lytic antibiotic, said method comprising the steps of (i) separating said target bacteria from any other microbial species, if present, (ii) determining the extracellular adenylate kinase content of a culture of said target bacteria, (iii) adding the lytic antibiotic to the culture to form a mixture and incubating said mixture for a period sufficient to allow the antibiotic to exert a lytic effect, and (iv) determining the extracellular adenylate kinase content of the incubated mixture to assess whether lysis

has taken place, wherein a greater amount of extracellular adenylate kinase in step (iv) as compared with step (ii) indicates said bacteria is sensitive to the lytic antibiotic.

51. (Previously Presented) The method according to claim 50 wherein in step (i), the target bacteria are separated using immunocapture techniques.

52. (Previously Presented) The method according to claim 50 wherein the culture of target bacteria comprises a selective growth medium which favors said bacteria.

53. (Previously Presented) A method for determining the susceptibility of a target bacteria to a non-lytic antibiotic agent or a non-lytic biostatic agent, said method comprising (i) separating said target bacteria from other microbial species, if present, (ii) incubating a culture of said target bacteria in the presence of said non-lytic antibiotic agent or said non-lytic biostatic agent, (iii) determining whether the total adenylate kinase content of the culture increases or decreases over the period of the incubation by removing multiple samples at spaced time periods, lysing bacteria in said multiple samples and assaying for adenylate kinase in said multiple samples, wherein an increase in the amount of total adenylate kinase in said multiple samples over time indicates that said bacteria are not sensitive to said agent.

54. (Previously Presented) The method according to claim 53 wherein the bacteria are lysed using a chemical lytic agent.

55. (Previously Presented) The method according to claim 53 wherein in step (i), the target bacteria are separated using immunocapture techniques.

56. (Previously Presented) The method according to claim 53 wherein the culture of target bacteria comprises a selective growth medium which favors said bacteria.